REMARKS

Claims 1-11 are pending in this application. By this Amendment, claims 1, 4, 5 and 8 are amended, and claims 9-11 are added. Reconsideration in view of the above amendments and the following remarks is respectfully requested. Unless otherwise indicated in the remarks set forth below, the amendments to the claims are made for the purpose of correcting informalities and/or to more clearly define the claimed invention, and are not made for the purpose of overcoming the cited art.

The Patent Office objects to claims 4 and 8 because of informalities. Claims 4 and 8 have been amended to correct the informalities.

The Patent Office rejects claims 1-3 and 5-7 under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 5,689,355 to Okubo et al. in view of U.S. Patent No. 4,317,010 to Fillot. This rejection is respectfully traversed.

Applicant respectfully submits that Okubo and Fillot fail to establish a prima facie case of obviousness, as required under §103. Okubo is directed to a repeater system in which an RF signal sent to a slave device is detected and compared to a reference value. The difference between the detected RF signal and the reference value is used to retrieve a gain correcting value from memory. The gain correcting value is used to adjust the gain of a variable gain amplifier.

The Patent Office admits that Okubo does not teach mixing a modulated modem signal of a predetermined level with the RF signal in a master repeater, detecting the modulated

modem signal in the slave repeater and comparing the level of the detected modulated modem signal in the slave repeater to the predetermined level to obtain the difference.

Fillot is directed to a remote monitoring system that monitors multiple amplification circuits in order to detect faults in a transmission line. Fillot accomplishes this by generating a pilot signal that is mixed with a data signal, and that is used to monitor the transmission channels. The Patent Office alleges that it would have been obvious to mix the pilot signal disclosed in Fillot with the RF signal used in Okubo, transmit the mixed signal to the slave repeater of Okubo, detect the pilot signal in the slave repeater and compare it to a predetermined pilot signal value.

However, in the Fillot system, the pilot signal is not analyzed locally at each repeater. Instead, the pilot signal is looped back to a fault detector 17 in the monitoring station 1 or, alternatively, is detected by a fault detector at the monitored station 2. See column 10, lines 44-57 of Fillot, which describes how each repeater in the system "no longer contains a control loop controlled by a pilot regulating signal which enables the amplification gain of the repeater to be automatically and locally regulated by means of one or more linear variable elements, without control by the monitoring station" (emphasis added). Instead, Fillot teaches that "each repeater has a static regulating circuit 31 and 41 which equalizes the amplification gain, not to a preset threshold by local comparison of a reference voltage and the voltage of the pilot signal, but to a precise value which is transmitted at the command of the remote control unit 13 of the

monitoring station 1 and after analysis of the tests carried out by the fault detector or detectors such as 17" (emphasis added).

In contrast, claims 1 and 5 recite comparing, at the slave repeater, a detected modulated MODEM signal level with a reference level, obtaining a difference between the levels, and adjusting a gain of an amplifier for the RF signal in the slave repeater by using the obtained difference to calculate the gain adjustment. Thus, Fillot actually teaches away from the present invention by describing a system in which no local comparison of a reference voltage and a voltage of the pilot signal is performed at each repeater. In the Fillot system, the comparison of the pilot signal to a reference voltage, as well as fault detection, is performed at either the monitoring station or at a monitored station, neither of which contain repeaters.

Because the Fillot system teaches away from locally regulating the gain of each repeater, there is no teaching or suggestion as to how a pilot signal would be utilized in the Okubo system. Thus, Applicant respectfully submits that there is no teaching or suggestion, in either Okubo or Fillot, to make the combination asserted by the Patent Office.

Further, as discussed above, claims 1 and 5 recite adjusting a gain of an amplifier for the RF signal in the slave repeater by using the difference between a detected modulated modem signal level and a reference level to calculate the gain adjustment. In contrast, Okubo teaches determining a difference between a reference current value and a detected current value, and then using the difference between these two values to retrieve a gain correcting value that is pre-stored in a control circuit. See, for example, column 6, lines 57-59 and column 7, lines 18-21.

In the present invention, the gain adjustment values are not pre-stored, but are rather calculated based on the difference between a reference level and a detected signal level.

Thus, for at least the reasons set forth above, Applicant respectfully submits that the combination of Okubo and Fillot fail to render obvious the subject matter of claims 1 and 5. Claims 2 and 3 depend from claim 1, and claims 6 and 7 depend from claim 5. Thus these claims are also allowable for at least the reasons discussed above, as well as for the additional features they recite.

For example, with respect to claims 3 and 7, the Patent Office alleges that Fillot describes at least a repeater that compares a pilot signal with a predetermined value to set the gain of an amplifier, and a repeater that sets the gain according to direct instructions from a monitoring unit. However, as discussed above, the repeaters used in Fillot do not preform a local comparison of the pilot signal with a reference value. Instead, Fillot teaches that the pilot signal is analyzed at either the monitoring station or at the monitored station.

Accordingly, for at least the reasons set forth above, withdrawal of the rejection of claims 1-3 and 5-7 under 35 U.S.C. §103(a) is respectfully requested.

The Patent Office rejects claims 4 and 8 under 35 U.S.C. §103(a) as unpatentable over Okubo and Fillot, as applied to claims 1 and 5, respectfully, and further in view of U.S. Patent No. 4,617,656 to Kobayashi et al. Claim 4 depends from claim 1, and claim 8 depends from claim 5. Thus, for at least the reasons set forth above, Applicant respectfully submits that the combination of Okubo, Fillot and Kobayashi fail to render obvious the subject matter of claims

4 and 8. Further, Kobayashi fails to remedy the deficiencies noted above in Okubo and Fillot. Thus, withdrawal of the rejection of claims 4 and 8 under 35 U.S.C. §103(a) is respectfully requested.

Applicant respectfully submits that added claims 9-11 are allowable.

CONCLUSION

In view of the foregoing amendments and remarks, it is respectfully submitted that this application is in condition for allowance. Favorable consideration and prompt allowance of claims 1-11 are earnestly solicited.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and please credit any excess fees to such deposit account.

Respectfully submitted,
FLESHNER & KIM, LLP

Daniel Y. J. Kim
Registration No. 36,186
René A. Vazquez
Registration No. 38,647

P.O. Box 221200
Chantilly, VA 20153-1200
703 502-9440 DYK/RAV:tmd
Date: December 17, 2002